like evaluation. They felt that a coordinated evaluation of the JV will not happen unless NGOs begin to feel pressures for feedback from their funding sources.

Mike Miller and Bob MacLandress recognized the limitations of the current draft of the CVJV plan with respect to providing a background and theoretical framework for the CVJV. They agreed to complete these important parts of the evaluation plan. They were also very receptive to suggestions of ways to more efficiently organize the evaluation issues of the plan. The Team suggested the writers should consider reorganizing and consolidating the projects/evaluation issues. They suggested that large lists of projects can be intimidating to management boards. Mike Miller questioned the expectations of the Team with regards to examining the linkage between JV population and habitat objectives. The Team clarified by explaining that "population objectives" of ducks in wintering joint ventures are really only useful in developing habitat objectives. This is due to the fact that goals for ducks in the NAWMP are stated as breeding populations and no clear relationships exist to predict the number of birds on certain wintering grounds based on breeding populations. The intent of developing population objectives using 1970s data is to provide a basis, in conjunction with assumptions on limiting factors in the JV, for the formulation of habitat goals.

Action:

- 1. Team will provide specific written comments on the CVJV evaluation plan to Mark Koneff. Mark will consolidate the comments and send along to Mike Miller and Bob MacLandress.
- 2. Mark Koneff will send a listing of the NAWMP Evaluation Team members and their addresses and phone numbers to Mike Miller.
- 3. Mark Koneff will check with Bob Streeter on current availability of the \$30,000 budgeted by NAWWO for evaluation coordination.
- 4. The Team will devote time into developing a strategy to convince the CVJV management board about the need for evaluation in the CVJV.

Evaluation of the North American Wetlands Conservation Act (NAWCA) At the request of Bob Streeter, Mark Koneff discussed recent amendments to the NAWCA which require a continental scope planning and evaluation effort to ensure that appropriated and matching funds are being spent in a manner which provides the desired positive impacts on wetland dependent migratory bird populations. Mark mentioned that North American Wetlands Conservation Council (NAWCC) staff have been charged with the development of the wetland conservation plan and evaluation strategy. Bob Streeter, NAWCC Coordinator, requested that the Evaluation Team consider ways in which it could aid/facilitate the NAWCA evaluation planning process.

understood. To the extent that they are, Adaptive Management provides a link to habitat condition through model parameters. Bob Trost agreed to brief Bob Streeter on the harvest regulations setting process and to discuss the events at the SRC meeting.

Action:

1. Bob Trost will brief Bob Streeter on the annual harvest regulations process and the implications of the discussions at the Jan. 1995 SRC meeting.

NAWMP Continental Evaluation First Step

The Team initiated a process to begin to take a continental perspective in evaluating the NAWMP and the role of Joint Ventures in that evaluation. The goal of this process is to draft a report to the NAMWP Committee summarizing the planning, implementation, and evaluation activities that have gone on under the NAWMP to date and provide guidance on the progress and direction of the NAWMP and individual joint ventures as well as to identify major evaluation issues which are essential for effective evaluation of the NAWMP and which transcend joint venture boundaries.

The Team discussed the goals of the JV process. First was to answer 2 questions. Do the goals and objectives and strategies hang together to support the goals of the NAWMP? Do the biological assumptions upon which JV implementation is based make sense? What are the priority evaluation needs of joint ventures and continentally? Upon completion of this process, the Team will prepare a report to the NAWMP Committee which will summarize its findings plus will identify regions/areas where progress is lacking to the point of being limiting. Jim Ringelman presented 4 possible alternatives in this continental approach (link breeding JV to Winter and Migration JV)

Benchmark Approach-- compare present winter/migration habitat with that in 1970-79 to assess relative habitat availability.

Energetic Approach-- match winter objectives from energetic conversions ... *K* issues.

Convert breeding ground goals into use/day goals.

Do Nothing-- assume breeding grounds limiting population growth and increasing winter habitat has no effect.

Bottleneck-- designing migration and winter habitat needs based on worst case scenario ... large fall flight, drought.

Bob Trost felt Jim's ideas were good, but suggested that the process begin with some basic accounting of *JV* and NAWMP goals to see how well they hang together. The following table was developed ...

Population Goal Accounting -- Do pop. objectives of JVs coalesce to overall NAWMP goals?

JV	Breeding:	Wintering:
PHJV	20.8 million	
PPJV		6.8 million
LMJV		8.7 million
GCJV		13.0 million
CVJV		0.5 million 4.7 million
EHJV	?	
Other	22.4 million	
Outside Survey	11.0 million	
Total	61. 5 million	

The suggestion was made that we should be examining the results of the May survey by specific transect/segments that are within the joint venture boundaries. It was pointed out that the boundary of the PHJV is very much in question. It was also suggested that the Team in reporting to the NAWMP Committee should emphasize the continental picture in population response to varying habitat conditions—include information on and show relationships between northern breeding areas, the PHJV, and the PPJV. How do populations change in these joint ventures in response to varying conditions. In reporting to the NAWMP Committee the Team should point out where the NAWMP is relative to the population goals but should emphasis the variable nature of continental waterfowl populations and should stress other measures of progress such as recruitment rate on the breeding grounds. The report to the NAWMP Committee should also put weight on the population goals for the surveyed area vs the continental goals since no information is available to address the continental goals.

Wintering/Migratory Joint Venture Population Analysis and Accounting

Jeff Nelson and Mark Koneff presented an analysis of dabbler winter numbers and distribution derived from MWI and harvest data. The analysis followed a similar approach to that used in the Lower Mississippi Valley JV Evaluation Plan. The intent was to compare wintering JV habitat objectives with the estimated number of wintering birds given the NAWMP population goals are met and winter distribution of birds is the same as it was in the 1970s. It is hoped that this approach will provide a means to begin to evaluate the adequacy of wintering JV habitat objectives from a strictly energetic (foraging habitat) perspective.

Several assumptions are implicit in this approach to linking breeding JVs to wintering and migratory JVs. First, it is assumed that winter distributions in the future will be the same as in the 1970s. Secondly, this approach assumes that what we observe is what is needed --

i.e., foraging habitat. Third, this approach assumes that use days are convertible to management objectives. Lastly, it is assumed that mid-winter inventory data and harvest data provide a reasonably unbiased picture of the winter distribution of waterfowl.

Action:

- 1. Mark will continue the national level analysis expanding it to include divers, and geese with the cooperation of Jeff Nelson, Jim Ringelman, and Bob Trost. Need to clarify which population goals are used in the analysis. Mexico will continue to be included in the analysis.
- 2. The subgroup will consider ways of incorporating migratory JVs into this analysis. One method suggested was to use waterfowl count by month at NWRs as wells as banding data to construct migration corridors and migration curves and use this information to predict use days on migratory JVs.
- 3. Upon completion, analysis results will be presented with a summary table and methods section. There is opportunity to fine tune the analysis with inclusion of species specific population data and region specific differences in parameters.
- 4. Bob Trost will provide the subgroup with monitoring data for the spring migration period -- special surveys, as well as data from waterfowl surveys on NWRs in the fall.

Assumptions in Linking Wintering JVs to Breeding JVs in a Continental Perspective

• The Lower Mississippi Valley JV assumed that foraging habitat is limiting wintering waterfowl populations in the Lower Mississippi Valley Joint Venture. Several other JVs have begun to carry over this assumption in the development of their evaluation plans. The suggestion was made that this perhaps is a "continental evaluation issue or assumption" that needs to be brought before the NAWMP Committee. If foraging habitat on the winter grounds is not limiting populations and would not given current habitat availability and meeting the goals of the NAWMP, or if the importance of foraging habitat as a limiting factor varies by joint venture, major changes in. the implementation of the NAWMP could be in order.

Action:

1. In the report to the NAWMP Committee, the following should be identified as "evaluation issues critical to the continental evaluation of the NAWMP" ... Does habitat limitation exist on any wintering/migratory joint venture? Is foraging habitat really the limiting factor on wintering/migratory grounds? How does habitat limitation on the wintering grounds effect continental waterfowl populations? Winter or migration mortality? Body condition and reproductive success? Ability of populations to respond to or take advantage of changing environmental conditions?

- 2. In the report to the NAWMP Committee, provide suggestions on how to facilitate the examination of these questions.
- 3. Establish a subgroup of experts to hold wintering ground workshop. Team representation will be Jeff N.• Jim R.• Bob T.• and Mike A. Others who will be asked to attend are...Ken Reinecke, Mike Miller, Loren Smith, Leigh Frederickson, Al Afton, and Mike Conroy. The meeting is to be held near Memphis, TN in April. This workshop is to take a critical look at the assumptions of wintering and migratory joint ventures, consider whether use-days is an appropriate index to resource demand, review the rationale and evidence for food limitation in these joint ventures and links to waterfowl demographics, discuss how indices to resource demand are convertible to management actions, and brainstorm ways in which hypotheses about wintering resource limitations could be tested with respect to effects on waterfowl demographics.
- 4. Letter to Joint Venture Coordinators (wintering and migratory) -- provide us with any data or references they can that could be used to compare present waterfowl habitat quality and quantity with that in the 1970s.

Assumptions on the Breeding Grounds

Management can alter production rates on a landscape scale.

Management can increase breeding population size on a landscape scale.

Host of assumptions that are associated with the use of the Mallard Productivity Model in planning.

Little time was left to spend on the breeding grounds. General consensus was that the goals appeared to make sense and hang together from an overall NAWMP perspective. The NAWMP Evaluation Team believes that the correct problems have been identified in joint venture plans and that explicit and implicit assumptions related to factors limiting waterfowl production are supported by current literature.

Eastern Habitat Joint Venture and the Black Duck Joint Venture

Bob Bailey reviewed the historical development of the Eastern Habitat Joint Venture.

This JV was originally established as a migratory joint venture targeted at black ducks. Bob expressed concern that the goals of the JV currently have been distorted from the original intent of the JV. The EHJV currently cites a lack of brood habitat as limiting waterfowl populations in eastern Canada. The Team questioned the validity of this assumption. The current EHJV implementation plan promotes the JV as a waterfowl breeding JV rather than a migratory JV focused particularly on black ducks.

The Evaluation Team discussed how to question or challenge the current track of the EHJV in a constructive fashion. The Team felt that they were justified in challenging the assumption that brood habitat is limiting waterfowl populations in eastern Canada. They were aware of no evidence to support this assumption and in fact were aware of some contradictory

Page 11

North American Waterfowl Management Plan Evaluation Team Minutes of January 31 to February 3 Meeting in Sacramento, CA

evidence. Further, this major assumption driving joint venture implementation is not tested in their evaluation plan. Secondly, the Team feels that the JV should be asked to demonstrate how the goals of the EHJV/BDJV are complementary with the goals of the NAWMP. Lastly, some consideration and future analysis should be given to combining portions of the EHJV, ACJV, LGL/SLBJV, and the BDJV. This analysis and recommendation should be based on the inconsistencies that are apparent in the approach of the different JVs and common problem that the JVs have...black ducks.

The following issues were discussed as being incorporated in the report to the NAWMP Committee. These issues will be revisited at the summer 1995 meeting of the Evaluation Team.

The issues are:

Inconsistencies of NAWMP goals and EHJV goal for black ducks. Transition of EHJV from staging/migration to breeding JV --brood habitat assumption. Progress on "what can be done now" with respect to black duck populations. Given that a monitoring program is operational for black ducks -- possibility exists to merge EHJV,LGL/SLBJV maybe part of ACJV. The BDJV could focus on evaluating success of the merged habitat JV.

Action:

1. This issue will be revisited at the next meeting. The goal will be to decide upon what recommendations to make to the NAWMP Committee.

Next meeting:

Meeting locations proposed were Sackville in the Canadian Maritimes or in the PCJV. Meeting will be scheduled sometime in August. Potential dates of 14-18 were proposed.